

REMARKS

Claims 1-15 are all the claims pending in the application. By this amendment, Applicant editorially amends claims 1-3, 5, 6, 8, 10, and 11. The amendments to claims 1-3, 5, 6, 8, 10, and 11 were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents. In addition, with respect to claims 10 and 11, Applicant corrected a typographical error relating to the dependency of the two claims. The amendments to claims 1-3, 5, 6, 8, 10, and 11 were not made for reasons of patentability.

In addition, Applicant adds claims 13-15.

Preliminary Matters

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

On April 14, 2001 and September 24, 2003, Applicant filed Information Disclosure Statements along with Forms PTO/SB/08 A & B. Accordingly, Applicant respectfully requests the Examiner to initial the references (if not already initialed) listed on the forms PTO/SB/08 A & B filed with the Information Disclosure Statements on April 14, 2001 and September 24, 2003 and return the initialed forms PTO/SB/08 A & B in the next Office Communication.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 5, 6, 7, 11, and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter "APA") in view of U.S. Application No.

6,693,901 to Byers (hereinafter “Byers”). Applicant respectfully traverses this rejection in view of the following remarks.

Of these rejected claims, only claims 1 and 7 are independent. The response, at least initially, focuses on these two independent claims. To begin independent claim 1 recites, among a number of unique features, “inactivating one of lines between adjoining two hubs.” The Examiner acknowledges that the APA does not teach or suggest inactivating one of lines between adjoining two hubs. The Examiner, however, alleges that Byers cures the deficient teachings of the APA (see page 3 of the Office Action). Applicant respectfully disagrees.

For example, the illustrative, non-limiting embodiment of the present invention relates to a LAN, which is available for transmitting not only unicast communication but also broadcast communication. A broadcast communication allows for a piece of information sent from one sender to be received by all connected receivers. If all of the lines between two adjacent hubs are activated, then a broadcast packet is repeatedly transmitted in a ring topology connection in cycle, and as a result, bandwidth of the network is wasted. In the present invention, however, one of lines between adjoining two hubs is inactivated; thereby, preventing waste of the bandwidth in broadcast communication. Since one of the lines between two adjacent hubs is inactivated, the activated lines or the logical cascade connections between the hubs logically compose a single hub, although their physical connection has a ring topology.

Moreover, in the exemplary, non-limiting embodiment of the present invention, each of hubs is connected with plurality of terminals. Accordingly, even if one of the hubs is unavailable, routes between terminals do not have to be re-configured. That is, when the hubs

detect that one of the activated lines becomes unavailable, the hubs activate the inactivated line instead of the unavailable one. Since this re-configuration can be automatically performed at the hubs, it does not change the relationship between the logical hub and the terminals; consequently, the network configurations of the terminals does not have to be changed. This exemplary, non-limiting embodiment is provided by way of an explanatory example only and is not intended to limit the scope of the claims in any way.

Byers, on the other hand, only teaches that the backplane-based interconnection system is configured to form point-to-point connections (106a-f) from one slot of the backplane to every other slot of the backplane (see *Abstract*). In other words, Byers relates to a unicast communication network or point-to-point communication. In the unicast communication, a receiver is always designated. Therefore, when a hub receives a unicast packet whose receiver is designated to another hub, then the hub can drop the packet. That is, Byers is not related to broadcast communication and as such, there is no reason to deactivate one of the lines so as to form a logical cascade connection.

Moreover, Byers only teaches that the control circuit 112 provides some control over the communication implemented by the hub (Fig. 1; col. 4, lines 5 to 27). Byers fails to teach or suggest how the control is implemented or the type of control. The Examiner alleges that if the routing is directed through one line, it means that the other line is deactivated (see page 3 of the Office Action). Applicant respectfully submits that this appears to be a mere speculation. Byers teaches a routing table, which means that one set of data can be routed via one line and another set of data can be routed via another line, thereby having both lines active because of high data

traffic, for example. That is, there are many other alternatives to the one alleged by the Examiner. Moreover, since Byers only deals with point-to-point communication, there is no incentive to inactivate one of the lines between two adjacent hubs. In other words, Byers clearly fails to teach inactivating one of the lines between two adjacent hubs. In short, Byers does not teach or suggest any details about activation or deactivation of the lines between the hubs. At the very least, Byers clearly fails to teach or suggest inactivating one of the lines between two adjacent hubs.

Furthermore, Byers teaches that each hub is connected with a single control routing. In Byers, when a hub becomes unavailable, routes between terminals must be re-configured. For example, in Byers' Fig. 1, the control routing 112 of the circuit pack 104b via four routes, each of which had different permutation of the hubs 108a-d and point-to-point connections 106a-f. In regular operation, one of the four routes is configured to activate as a route for communication between the control routings. If the connection 106a is included in the configured route and becomes unavailable, then the network configurations of the control routing 112 must be re-configured to remove the connection 106a from the active routes.

Moreover, the Examiner alleges that one of ordinary skill in the art would have been motivated to combine the references so as to control the route used by the joining hubs (see page 3 of the Office Action). As shown in Fig. 1 of the APA, each hub can route data to another hub via only one path. That is, there is only one path to deliver data to each of the hubs. In short, there is no reason to combine Byers' control of routing data, where one set of data (*e.g.*, urgent, real-time data) may be delivered via one path and another set of data (*e.g.*, non-urgent data) via

another path, with the APA that has only one path for each hub. In short, one of ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner. For at least these exemplary reasons, Applicant respectfully submits that claim 1 is patentable over the combined teachings of the APA and Byers.

Claims 5 and 6 are patentable at least by virtue of their dependency on claim 1. Moreover, with respect to the dependent claims 5 and 6, the Examiner alleges that the APA teaches having the hubs split into groups and where each group is powered with a different power source and having one line of each terminal connect to one group and another line of the terminal connect to the other group (see pages 3-4 of the Office Action). First, Applicant respectfully point out that there is no teaching or suggest in the APA that the hubs are split into groups. If the Examiner disagrees, Applicant respectfully requests the Examiner to provide a citation for such a teaching and/or to quote description of splitting the hubs into groups in the APA.

Furthermore, the Examiner alleges that it is well known to connect various groups of hubs with different power sources, and then to connect these various groups with each other to prevent power failures. Applicant invites the Examiner to provide a reference for such a teaching and to provide the motivation for combining the reference with the APA and Byers. “A broad conclusionary statement, standing alone without support, is not ‘evidence’.” *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001). For at least these additional reasons, Applicant respectfully requests the Examiner to withdraw this rejection of claims 5 and 6.

Claim 7 recites features similar to the features argued above with respect to claim 1. Therefore, these arguments are respectfully submitted to apply with equal force herein. For at least substantially the same reasons, claim 7 is patentable over the combined teachings of the APA and Byers. Claims 11 and 12 are patentable at least by virtue of their dependency on claim 7.

Dependent claims 2, 3, 8, and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA and Byers in view of in view of U.S. Patent No. 6,308,282 to Huang (hereinafter “Huang”) and dependent claims 4 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA and Byers in view of U.S. Patent No. 6,594,231 to Byham (hereinafter “Byham”). Claims 2-4 and 8-10 depend on claims 1 and 7, respectively. Applicant has already demonstrated that the combined teachings of the APA and Byers do not meet all the features of claims 1 and 7. Huang is only cited for its teaching of a network card detecting a failure on the network and Byham is only cited for its teaching of stackable hubs. Clearly Huang and Byham fail to cure the deficient teachings of the APA and Byers. Therefore, claims 2-4 and 8-10 are patentable at least by virtue of their dependency on claims 1 and 7, respectively.

New Claims

In order to provide more varied, Applicant adds claims 13-15. Claims 13-15 are patentable at least by virtue of their dependency on claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 09/874,219

Attorney Docket No.: Q64862

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

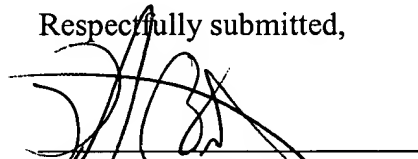
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